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INTEL CORPORATION

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

FUZZYSHARP TECHNOLOGIES
INCORPORATED,

Plaintiff,

v.

INTEL CORPORATION,

Defendant.

Case No. 12-cv-4413 YGR

DATE: April 30, 2013

TIME: 2:00 P.M.

DEPT: Courtroom 5 – 2nd Floor

Honorable Yvonne Gonzalez Rogers

**DEFENDANT INTEL'S REPLY IN SUPPORT OF INTEL'S
MOTION FOR JUDGMENT ON THE PLEADINGS**

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1 **I. INTRODUCTION**

2 Fuzzysharp has done nothing to rebut Intel's showing that the claims asserted in this case
 3 are patent ineligible under 35 U.S.C. Section 101. In its opening brief, Intel explained that this
 4 Court and the Federal Circuit previously found that all Fuzzysharp claims asserted in the *3D*
 5 *Labs*¹ case were patent ineligible under the machine or transformation test.² Dkt. No. 28, at 1-2,
 6 6-8. Intel also demonstrated that the additional claims asserted in this case are not distinct from
 7 the claims asserted in the *3D Labs* case in any way that is meaningful to a patent-eligibility
 8 analysis.³ *Id.* at 18-19. In *3D Labs*, the Federal Circuit instructed this Court to further consider
 9 patentability under the Supreme Court's decision in *Bilski*.⁴ *Bilski* reaffirmed the
 10 machine-or-transformation test as "a useful and important clue," and an "investigative tool," but
 11 held that was not the sole test of patent-eligibility. Explicating *Bilski*, *Mayo*⁵ enunciated two
 12 independent standards for patent-eligibility. As Intel demonstrated in its opening brief, the claims
 13 asserted in this case remain unpatentable under the standards announced in *Mayo*. Dkt. No. 28, at
 14 11-19.

15 Fuzzysharp does not address the *Mayo* standard at all. Instead, it relies on two arguments.
 16 First, Fuzzysharp disagrees with the proposition that the challenged claims all describe the same
 17 type of unpatentable mathematical process, though it offers no reasoning in support of its view.
 18 Dkt. No. 32, at 6. Intel's use of a representative claim to clarify and focus the analysis is a
 19 common and appropriate procedure in patent cases. Furthermore, it is justified in this case both
 20 because the asserted claims are numerous and because Intel has demonstrated that for the
 21 purposes of this patent-eligibility analysis, they are substantively similar to one another and to
 22 those asserted in *3D Labs*.

23 _____
 24 ¹ *Fuzzysharp Techs., Inc. v. 3D Labs, Inc.*, 47 Fed. Appx. 182 (Fed. Cir. 2011).

25 ² In *3D Labs*, Fuzzysharp asserted claims 1 and 12 of the '047 patent, and claims 1, 4 and
 26 5 of the '679 patent, and claims 1 and 12 of the '047 patent.

27 ³ In this case, Fuzzysharp asserts the same three claims of the '679 patent, and claims 1
 28 and 12 of the '047 patent as in *3D Labs* (claims 1, 4 and 5), the same two claims of the '047
 patent (1 and 12), and additionally, claims 2-6, 8-11, 13, 15-17, 20, 21, 23-25, 27, 46, 47, 49, 51,
 54, 55, 57-59, 61-65, 67 and 68 of the '047 patent.

⁴ *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

⁵ *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012).

Fuzzysharp's second argument relies on the Federal Circuit's observation in *3D Labs* that under then-recent case law, "the patent eligibility of at least one of the asserted claims turns on questions of claim construction that the district court did not have the opportunity to address." 447 Fed. Appx. at 186. Fuzzysharp does not consider whether, in the wake of *Mayo*, a claim construction hearing is required in this case. It is not. It is well-established that courts need not await claim construction but may determine patent-eligibility on the pleadings. *Mayo* was not available to the Federal Circuit when it heard the *3D Labs* case, but since *Mayo*'s issuance, district courts have vigorously applied it to invalidate ineligible claims at the pleading stage. Moreover, a patentee who contends that claim construction is necessary must identify the disputed terms and show how defining them would resolve the question of patent-eligibility. Fuzzysharp has not done this, undoubtedly because it cannot point to any construction that would save the claims. Indeed, Intel even analyzed the claim constructions previously proffered by Fuzzysharp, and found that they only further support a finding of patent ineligibility. Dkt. No. 28, at 5 n.4, 13, 14 n.8, 16-17. It appears that Fuzzysharp is simply brandishing the Federal Circuit's statement as a kind of golden ticket that it believes entitles it to reach the claim construction phase of this case, regardless of the merits.

Fuzzysharp devotes the remainder of its opposition to accusing Intel of misstating the record or failing to disclose relevant information. These arguments are a diversion and not relevant to the issues in this motion. Furthermore, as shown below, they are incorrect.

II. FUZZYSHARP OFFERS NO MEANINGFUL REBUTTAL TO INTEL'S SHOWING THAT ALL OF THE ASSERTED CLAIMS ARE PATENT-INELIGIBLE

Intel made a detailed presentation in its opening brief showing that the claims Fuzzysharp asserted in the *3D Labs* case fail the machine or transformation test, as this Court and the Federal Circuit both found. Dkt. No. 28, at 6-8. Intel explained why all of the claims asserted in this case are drawn to abstract mathematical algorithms with nothing more than generic computer components that are not meaningfully limiting. *Id.* at 3-8. Intel further established that the only issue remaining in the patent-eligibility analysis after the Federal Circuit remand was whether these claims satisfy the further standards announced in *Bilski* and *Mayo*, and showed that they do

1 not. *Id.* at 11-17. Finally, Intel demonstrated that there is no material difference between the
2 claims held invalid in *3D Labs* and the additional claims asserted in this action for purposes of
3 eligibility analysis. *Id.* at 18-19.

4 Fuzzysharp has offered no substantive response or counterargument to any of the
5 foregoing. Fuzzysharp does not mention the *Mayo* case or any other case law in its opposition, let
6 alone apply it to the claims. Nor does Fuzzysharp provide any analysis of the patents in suit or
7 the asserted claims. Accordingly, Fuzzysharp has effectively conceded all of Intel's substantive
8 arguments. *FMC Corp. v. Up-Right, Inc.*, 21 F.3d 1073, 1077 (Fed. Cir. 1994) ("FMC does not
9 argue to the contrary in this appeal, and therefore FMC effectively has conceded [the
10 argument].")

11 The closest that Fuzzysharp comes to contesting the issue is on page 6 of its brief, where it
12 asserts generally that it disagrees with Intel's explanation of why all the challenged claims
13 describe the same type of unpatentable mathematical process. Dkt. No. 32, at 6. Fuzzysharp
14 provides no reasoning and points to no evidence to refute Intel's argument. Intel's use of a
15 representative claim -- claim 1 of the '047 patent -- to clarify and focus the analysis is a common
16 and appropriate procedure in patent cases. *See, e.g., Classen Immunotherapies, Inc. v. Biogen*
17 *IDEC*, 659 F.3d 1057, 1063, 1068 (Fed. Cir. 2011) (analyzing patent-eligibility issue by reference
18 to one representative claim for each patent). Intel's opening brief also addressed particular
19 elements of other claims to show that they did not differ meaningfully from the representative
20 claim. *See* Dkt. No. 28, at 13 n.7, 14 n.8, 15 n.10, 16-17, 18-19. Nonetheless, for the Court's
21 convenience, Intel has attached a chart that graphically correlates the elements of the claims
22 asserted in *3D Labs* with those found in the additional claims of the '047 patent asserted here
23 (The same three claims of the '679 patent were asserted in both cases). *See* Attachment A. It is
24 evident that, as Intel previously showed, the additional limitations do not differ from those
25 asserted in *3D Labs* in any way that would take them outside the arguments advanced in Intel's
26 opening brief.

III. THERE IS NO SUPPORT FOR FUZZYSHARP’S CONTENTION THAT CLAIM CONSTRUCTION IS REQUIRED TO DECIDE THIS MOTION

Fuzzysharp advances only a single substantive ground on which it argues the Court should deny this motion -- a remark the Federal Circuit made in *3D Labs* noting that “under the Supreme Court’s decision in *Bilski* and our own more recent precedents, the patent eligibility of at least one of the asserted claims turns on questions of claim construction that the district court did not have the opportunity to address. Because the parties have not briefed those claim construction issues, we leave the task of construing the claim limitations in question to the district court.”

447 Fed. Appx. at 186. The statement appears to be dictum⁶ but even if it were not, it is inapplicable to this case. As noted in Intel’s opening brief, district courts have not hesitated, since the issuance of *Mayo*, to apply that decision directly to decide Section 101 issues on the pleadings. *See* Dkt. No. 28, at 20 (citing cases).⁷ Moreover, courts have required the party demanding claim construction to identify the terms requiring construction and to show how the patent-eligibility question depends on resolution of the construction dispute(s). *OIP Techs., Inc. v. Amazon.com, Inc.*, 2012 WL 3985118, *5 (N.D. Cal., Sept. 11, 2012) (“Plaintiff fails to explain how claims construction would materially impact the Section 101 analysis in the instant case; instead, it merely asserts in conclusory fashion that construction ‘will undoubtedly impact the scope of the claims and could have bearing on the subject matter eligibility analysis’”); *CyberFone Sys., LLC v. Cellco P’ship*, 885 F. Supp. 2d 710, 715 (D. Del. 2012) (“while plaintiff in this case did argue that claim construction should occur prior to a Section 101 analysis, plaintiff did not explain how claim construction might alter such analysis” nor “articulate a compelling reason why the court would lack a full understanding of the claimed subject matter if it did not first construe the claims”). Absent such a showing, courts will proceed to the Section 101 analysis. *Id.* Fuzzysharp pointed to no limitations in the asserted claims whose construction

⁶ The Federal Circuit remanded based on the intervening Supreme Court decision in *Bilski*, not because of any need to construe claim terms. 447 Fed. Appx. at 186.

⁷ That an appellate court, faced with new authority (*Bilski*) that the district court had not had the chance to apply in the first instance, remanded and suggested claim construction has little if any relevance to how a subsequent trial court should proceed when asked to apply clearly controlling, different Supreme Court authority (*Mayo*) in the first instance.

1 could alter the conclusion that the asserted claims are drawn to unpatentable subject matter.
2 Accordingly, this Court is not obligated to perform a costly, time-consuming exercise that Intel
3 has shown to be unnecessary and Fuzzysharp has failed to justify.

4 Fuzzysharp's insistence that claim construction is needed is especially unconvincing given
5 that a large set of Fuzzysharp's own proposed constructions is already in the record. Dkt. No.
6 28-1, Exh. 3. As Intel itself noted, the Court may assume the patentee's constructions if needed
7 for purposes of patent-eligibility analysis, Dkt. No. 28, at 8; *3D Labs*, 447 Fed. Appx. at 184. To
8 the extent that Fuzzysharp believes any claim terms need construction, they would have to come
9 from these terms (already construed by Fuzzysharp) or those in the attached chart, which plainly
10 do not differ for eligibility purposes. Yet Fuzzysharp argues, in effect, that it needs more
11 construction -- of what it does not say -- and that the Court must therefore postpone its decision
12 until sometime after the claim construction hearing. In reality, Fuzzysharp is relying on the
13 vagueness of the Federal Circuit's language to avoid identifying the limitations that would focus
14 this Court on the merits because there is no term on which it can prevail. As Intel pointed out,
15 Fuzzysharp's prior proposed constructions actually corroborate the unpatentability of the claims.
16 Dkt. No. 28, at 5 n.4, 13, 14 n.8, 16-17.

17 In sum, Fuzzysharp offers no analysis of the claim construction issue and instead treats it
18 simply as a license to prolong the case through the claim construction hearing phase. Intel
19 respectfully requests that the Court enter judgment on the pleadings and end this case now.

20 **IV. FUZZYSHARP INCORRECTLY ACCUSES INTEL OF MISSTATING THE** 21 **RECORD**

22 The bulk of Fuzzysharp's opposition is devoted to disputing Intel's characterization of
23 Fuzzysharp's pattern of settling to avoid a substantive evaluation of the validity of the patents in
24 suit in order to extract cost-of-defense payments from defendants while preserving the patents for
25 future lawsuits. Intel brought this pattern to the Court's attention because it provides necessary
26 context that supports prompt decision of this motion, and Intel has described it accurately. This is
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1 a strategy of which the Federal Circuit has expressed its disapproval.⁸ But even if Fuzzysharp's
 2 quibbling were correct, and it is not, it could not substitute for the substantive argument wholly
 3 absent from Fuzzysharp's brief.

4 As part of its diversionary tactic, Fuzzysharp insinuates that it settled *3D Labs*, not
 5 because it was afraid of the outcome on remand, but because 3D Labs' successor company
 6 ZiiLabs was eager to settle in order to clear its books prior to being acquired. Intel cannot speak
 7 to ZiiLabs' pre-acquisition strategies,⁹ but Intel notes it has acquired a number of companies over
 8 the years even though they were participants in active litigations. Additionally, if Fuzzysharp
 9 believes that the terms of that settlement are relevant, Intel will agree that Fuzzysharp can present
 10 the agreement to the Court for an *in camera* inspection. The amount of the settlement supports
 11 Intel's arguments, not Fuzzysharp's.

12 Fuzzysharp also makes specific accusations that Intel has misrepresented the record.
 13 These are incorrect. In particular, Intel's opening brief *did* (i) cite the patents in suit (*see* Dkt. No.
 14 32, at 2; *cf.* Dkt. No. 28, at Notice of Motion), (ii) identify and define the "Asserted Claims" (*see*
 15 Dkt. No. 32 at 2, 4, 6; *cf.* Dkt. No. 28, at Notice of Motion),¹⁰ (iii) accurately describe the Federal
 16 Circuit's holding in the *3D Labs* case (*see* Dkt. No. 32 at 2; *cf.* Dkt. No. 28, at 1-2, 6-8, 18, 19),
 17 and (iv) distinguish between the claims asserted in the *3D Labs* case and this case (*see* Dkt. No.
 18 32 at 2, 4, 6; *cf.* Dkt. No. 28, at 6, 18-19). Accordingly, all of Fuzzysharp's arguments fail.

19 **V. CONCLUSION**

20 Intel has demonstrated the patent ineligibility of the claims asserted in this case.
 21 Fuzzysharp has not even attempted to challenge that showing. The conclusion that the claims are
 22

23 ⁸ *See, e.g., Eon-Net, L.P. v. Flagstar Bancorp, Inc.*, 653 F.3d 1314, 1327 (Fed. Cir. 2011)
 24 (upholding sanctions against non-practicing entity for filing a lawsuit for improper purpose of
 inducing a settlement to avoid litigation expense).

25 ⁹ 3DLabs and Fuzzysharp settled prior to Intel's acquisition of ZiiLabs.

26 ¹⁰ Indeed, it is Fuzzysharp that misidentifies the asserted claims. The claims it lists on
 27 page 4 of its Opposition brief differ from those identified in the disclosure of asserted claims and
 28 infringement contentions Fuzzysharp served on Intel pursuant to Patent Local Rule 3-1. In its
 Opposition, it lists unasserted claims 7 and 26 of the '047 patent and unasserted claim 12 of the
 '679 patent, and omits asserted claim 3 of the '047 patent and asserted claim 5 of the '679 patent.
 It also incorrectly states that claim 12 of the '679 patent was asserted in *3D Labs* instead of claim
 5.

1 invalid for failing to claim patentable subject matter is supported by this Court's and the Federal
2 Circuit's prior decisions in this case and the Supreme Court's recent decisions addressing
3 patentable subject matter under 35 U.S.C. Section 101. There is no claim element whose
4 construction could alter that conclusion, and Fuzzysharp has failed to identify even a single one.
5 For these reasons, the asserted claims are invalid for failing to claim patentable subject matter,
6 and Intel respectfully requests an order so holding, and dismissing this case with prejudice.

7 Dated: April 5, 2013

By: /s/ Kenneth J. Halpern
Kenneth J. Halpern

8 Attorneys for Defendant and
9 Counterclaim-Plaintiff INTEL CORPORATION
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ATTACHMENT A

In *3D Labs*, Fuzzysharp asserted claims 1, 4, and 5 of the '679 patent, and claims 1 and 12 of the '047 patent. In the current case, Fuzzysharp asserted the claims it asserted in *3D Labs*, as well as additional claims from the '047 patent. No additional claims in the '679 patent have been asserted. The chart below demonstrates how every limitation of each additional '047 claim asserted in the instant case corresponds to language in the claims asserted in *3D Labs*. There is no limitation in the claims asserted in this case whose subject matter differs meaningfully from the subject matter already analyzed in *3D Labs*. Also see Dkt. No. 28, at 18-19. Below, the color coded headings correspond to the color coded representative claim language used in Intel's Motion. Dkt. No. 28 at 4.

To reiterate, the key is:

	Color	Limitation Type
mathematical limitations	red	reducing steps
	blue	visibility computations to be reduced
	purple	other math steps
	green	field of use recitations
	gold	generic computer elements

Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
REDUCING			
'679 5 '047 1, 12	<ul style="list-style-type: none"> reduction in the number and/or duration of visibility calculations reducing the visibility related computations in 3-D computer graphics reducing a step of visibility calculations in 3-D computer graphics 	'047 11, 46, 57, 64	<ul style="list-style-type: none"> a reduction in the number and/or duration of visibility calculations reducing [the/a step of] visibility computations in 3-D computer graphics reducing the visibility related computations
'679 1 '047 1	<ul style="list-style-type: none"> exempting from said occlusion or invisibility relationship computation those surfaces which are either always unoccluded or always hidden ignoring said determined at least one of the 3-D surfaces or their sub-elements during said visibility computations 	'047 11, 46, 57, 64	<ul style="list-style-type: none"> exempting from said occlusion or invisibility relationship computation those surfaces which are either always unoccluded or always hidden ignoring said determined at least one of the 3-D surfaces or their sub-elements during said visibility computation ignoring, in a subsequent step of visibility computations, at least one of said 3-D surfaces or said sub-elements that has been determined to be invisible in said computing step;

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Terms in Claims Asserted in 3DLabs		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
			<p>wherein said step is with respect to said perspective</p> <ul style="list-style-type: none"> • if said at least one of said 3-D surfaces or sub-elements is determined to be invisible to said viewpoint, ignoring the entity or entities during said visibility computation • skipping, at said step[of visibility computations], at least an occlusion relationship calculation for at least one entity that has been determined to be invisible in said computing step • skipping at least an occlusion relationship calculation at each of subsequent step or steps of visibility computations, wherein said visibility computations in each of said step or steps is from the perspective of each viewpoint from said group, or from the perspective of a subset of viewpoints from said group, for at least one entity that has been determined to be visible in said computing step
VISIBILITY CALCULATIONS / FIELD OF USE / OTHER MATH STEPS			
<u>'679</u> 1 <u>'047</u> 12	<ul style="list-style-type: none"> • occlusion relationship calculation • occlusion or invisibility relationship computation (known per se) being carried out on a plurality of surfaces from each viewpoint to be calculated • carrying out occlusion or invisibility relationship computations on said remaining surfaces 	<u>'047</u> 11, 46	<ul style="list-style-type: none"> • occlusion relationship calculation • occlusion or invisibility relationship computation (known per se) being carried out on a plurality of surfaces from each viewpoint to be calculated • carrying out occlusion or invisibility relationship computations on said remaining surfaces
<u>'679</u> 1 <u>'047</u> 1, 12	<ul style="list-style-type: none"> • viewpoint 	<u>'047</u> 2, 11, 46, 57, 64, 65, 67	<ul style="list-style-type: none"> • [same] viewpoint • viewpoint or a group of viewpoints • with respect to a viewpoint or a group of viewpoints • from a/the perspective of a [subset of] viewpoint[s] [from said group] • from the perspective of [a group of at least one/said]

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Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
			viewpoint <ul style="list-style-type: none"> with respect to a/said perspective of [a group of at least one/said] viewpoint
<u>'679</u> 1 <u>'047</u> 1, 12	<ul style="list-style-type: none"> selected ones of said surface selected set of [3-D surfaces and their sub-elements] selected set of [3-D surfaces and their sub-elements] 	<u>'047</u> 11, 46, 64, 65, 67	<ul style="list-style-type: none"> selected one of said surfaces selected [3-D] surface[s] selected set of [3-D surfaces and their sub-elements] [at least one entity] selected from 3-D surfaces and sub-elements of said 3-D surfaces 3-D surfaces or their sub-elements, or a selected set of both selected 3-D surface or sub-element [of a 3-D surface]
<u>'679</u> 1, 5 <u>'047</u> 1, 12	<ul style="list-style-type: none"> visibility calculations visibility related computations computing, before said step and from said perspective, the visibility of at least one entity selected from 3-D surfaces and sub-elements of said 3-D surfaces deriving the visibility of at least one of said 3-D surfaces or said sub-elements from the stored data in said computer storage 	<u>'047</u> 10, 11, 46, 57, 64, 65, 67, 68	<ul style="list-style-type: none"> visibility calculations visibility related computations deriving the visibility [step of/subsequent step of] visibility computation[s] reduce the computation for said selected 3-D surface or sub-element in said subsequent step of visibility computations visibility related computations are speeded up by using cache memory computing[, before said step and from said perspective,] the visibility of [at least one entity/a set of entities] selected from 3-D surfaces and sub-elements of said 3-D surfaces computing, before said step and from said perspective, the visibility of at least one entity selected from 3-D surfaces and sub-elements of said 3-D surfaces deriving the visibility of at least one of said 3-D surfaces or said sub-elements from the stored data in said computer storage computing the visibility of the part of [said selected 3-D

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Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
			surface or sub-element/the part of the bounding volume] that projects onto said each of said grid cells by comparing the depth-related data stored in said corresponding z-buffer element with the depth-related value associated with said part
<u>'047</u> 1	<ul style="list-style-type: none"> grid cells identifying grid cells identifying grid cells which are under or related to the projections or extents of projections associated with at least one of said 3-D surfaces or their sub-elements 	<u>'047</u> 3, 4, 15, 16, 49, 50, 57, 58, 64, 65, 67	<ul style="list-style-type: none"> grid cells the cell or cells of said at least one grid identifying grid cells identifying the cell or cells of said at least one grid which are related to each of said regions or extents of said regions identifying, from said perspective, grid cells which are related to the projections or extents of the projections identifying grid cells which are under or related to at least one projection or at least one extent of projection that is associated with at least one of said 3-D surfaces or their sub-elements identifying grid cells on a projection plane which are under or related to a projection associated with [the bounding volume of] said selected 3-D surface or sub-element said grid or grids are either regular or irregular at least one grid is regular dividing [each/said at least one] projection plane into at least one grid identifying step comprises dividing each projection plane into one or more grids
<u>'047</u> 1, 12	<ul style="list-style-type: none"> projection[s] extents of projections 	<u>'047</u> 2, 3, 15, 20, 21, 46, 49, 57, 64, 65, 67	<ul style="list-style-type: none"> projection[s] projection region extent[s] of [the] projection[s] extents of said regions [on said projection plane] extent of projection region

ATTACHMENT A

Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
'047 1	<ul style="list-style-type: none"> projection based computations 	'047 2	<ul style="list-style-type: none"> projection based computations the projection based computations comprise: defining one or more projection planes for generating projections with respect to a viewpoint or a group of viewpoints;
'047 1, 12	<ul style="list-style-type: none"> 3-D surfaces [and/or] their sub-elements 	'047 1, 2, 6, 8, 9, 11, 12, 13, 21, 23, 24, 25, 46, 47, 57, 58, 59, 61, 62, 64, 65, 67, 68	<ul style="list-style-type: none"> 3-D surfaces [and/or] their sub-elements 3-D surfaces said 3-D surface[s] [and/or] said sub-element[s] the [3-D] surfaces or the sub-elements of the surfaces a 3-D surface and at least one of the sub-elements of said 3-D surface one of said 3-D surfaces or one of said sub-elements of said 3-D surfaces a volume containing a 3-D surface, or a volume containing a 3-D surface and at least one of the sub-elements of said 3-D surface 3-D surfaces and sub-elements of said 3-D surfaces 3-D surface or sub-element [of a 3-D surface] 3-D surfaces are arranged in a hierarchy represented by patches in varying levels of details
'047 1, 12	<ul style="list-style-type: none"> sub-elements 	'047 6, 8, 11, 13, 21, 23, 24, 25, 46, 47, 57, 58, 59, 61, 62, 64, 65, 67, 68	<ul style="list-style-type: none"> sub-element[s]
'047 1, 12	<ul style="list-style-type: none"> data associated with said at least one of the 3-D surfaces or their sub-elements data related to said regions 	'047 6, 8, 9, 21, 23, 24, 46,	<ul style="list-style-type: none"> data associated with said at least one of [the] 3-D surfaces or their sub-elements data related to said 3-D surfaces or said sub-elements

ATTACHMENT A

Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
		58, 59, 61, 62, 64	<ul style="list-style-type: none"> • some or all of said data are or are related to the [largest] depths of said 3-D surfaces or their sub-elements • at least one of the data to be compared with said stored data is a value related to the depth value, the largest depth value, or the smallest depth value related to one of said 3-D surfaces or said sub-elements • the data to be compared with [said stored data/the data of said computer storage] is/are related to the depth[s] of [one of] said 3-D surface[s] or [one of] said sub-elements [of said 3-D surfaces] • the data to be compared with [said stored data/the data of said computer storage] is/are related to the largest depth[s] of said 3-D surface[s] or said sub-element • the data to be compared with [said stored data/the data of said computer storage] is/are related to the bounding volume[s] [associated with/of] said 3-D surface or said sub-element • data related to said regions [wherein said regions are related to the projections associated with said selected 3-D surfaces, said sub-elements]
'047 1	<ul style="list-style-type: none"> • comparing data associated with said at least one of 3-D surfaces or their sub-elements with stored data associated with the grid cells 	'047 11, 20, 54, 64	<ul style="list-style-type: none"> • comparing data associated with said at least one of 3-D surfaces or their sub-elements with stored data associated with the grid cells • a comparison between a pair of depth-related numbers to determine which of the surfaces or the sub-elements of the surfaces associated with said numbers is closer to said viewpoint • performing a depth comparison test between data associated with each of said identified cell or cells with said stored data in an element of said computer storage, wherein said element is the one associated with said cell

ATTACHMENT A

Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
			<ul style="list-style-type: none"> comparing the data associated with at least one of said 3-D surfaces, their sub-elements, bounding volumes of said 3-D surfaces, or bounding volumes of said sub-elements with the stored data associated with the grid cells
'047 1, 12	<ul style="list-style-type: none"> selected set set of entities selected from 	'047 46, 64	<ul style="list-style-type: none"> selected set set of entities selected from
'047 12	<ul style="list-style-type: none"> entity 	'047 11, 46, 64	<ul style="list-style-type: none"> entity[ies]
'047 12	<ul style="list-style-type: none"> generating projections 	'047 2, 46, 57	<ul style="list-style-type: none"> generating projections
'047 12	<ul style="list-style-type: none"> projection plane employing at least one projection plane for generating projections with said selected set of 3-D surfaces and said sub-elements with respect to said perspective 	'047 2, 3, 15, 46, 49, 57, 65, 67	<ul style="list-style-type: none"> projection plane[s] employing at least one projection plane for generating projections [with said selected set of 3-D surfaces and said sub-elements] with respect to said perspective [of a group of at least one viewpoint]
'047 12	<ul style="list-style-type: none"> bounding volumes 	'047 13, 24, 25, 46, 47, 57, 62, 64, 67	<ul style="list-style-type: none"> bounding volumes at least one of said bounding volume[s] is a volume containing a 3-D surface, or a volume containing a 3-D surface and at least one of the sub-elements of said 3-D surface
'047 12	<ul style="list-style-type: none"> updating data related to said regions 	'047 20, 46, 54, 58	<ul style="list-style-type: none"> updating data related to said regions updating data related to said 3-D surfaces or said sub-elements in a computer storage related to said identified grid cells if said test indicates that update is necessary for said cell, writing said data associated with said cell into said associated element
'047 12	<ul style="list-style-type: none"> identifying regions 	'047 2, 46	<ul style="list-style-type: none"> identifying regions

ATTACHMENT A

Terms in Claims Asserted in <i>3DLabs</i>		Corresponding Terms in Asserted Claims	
Claims	Language	Claims	Language
GENERIC COMPUTER ELEMENTS			
<u>'047</u> 1	<ul style="list-style-type: none"> stored data associated with the grid cells 	<u>'047</u> 9, 20, 54, 64	<ul style="list-style-type: none"> stored data associated with the grid cells data associated with each of said identified cell or cells
<u>'047</u> 12	<ul style="list-style-type: none"> computer storage 	<u>'047</u> 3, 5, 17, 20, 27, 46, 50, 51, 54, 55, 57, 58, 59, 61, 62, 63, 65, 67	<ul style="list-style-type: none"> computer storage the structure of said computer memory is based on a z-buffer or a quadtree the structure of said computer storage is based on a z-buffer said computer storage is accelerated by cache memory said identified grid cells are represented by a data structure based on a z-buffer for each of said grid cells, accessing the corresponding z-buffer element
<u>'047</u> 1, 12	<ul style="list-style-type: none"> stored data 	<u>'047</u> 1, 3, 9, 12, 20, 21, 23, 24, 46, 54, 64, 65, 67	<ul style="list-style-type: none"> stored data storing the data [depth-related] data stored

CERTIFICATE OF SERVICE

I certify that, on April 5, 2013, I electronically filed the foregoing with the Clerk of the United States Court for the Northern District of California by using the CM/ECF system.

/s/ Kenneth J. Halpern

Kenneth J. Halpern